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Noteworthy anatomical and physiological researches.

Researches on Drosophyllum lusitanicum.

A contribution on the vexed question of the nutrition of insectivorous plants is made by A. Dewèvre.[1] He has endeavored to ascertain whether the insects caught are really digested by a secretion from the plant as contended by Hooker, Darwin, Penzig and Goebel or whether bacteria digest them, the plant merely absorbing the products formed, according to the views of R. Dubois and Tischutkin.

After an anatomical and physiological investigation of the plant, the author concludes in spite of a number of negative results that absorption of proteids does take place; the absorption of carbohydrates is doubtful. Concerning the method of absorption the author ventures no statements.

The stem of Drosophyllum is very well developed, and the plant is perfectly well able to dispense with the nitrogen supply furnished by its captures. Moreover, the anatomical structure of the glands, both of the sessile and of the pedicellate types found, is not in harmony with the function of absorption. Since the supply of albuminous substances at the lower surface of the leaf would be more detrimental than beneficial, the author is inclined to question any connection whatever between the nutritive function and the mucilaginous, peptone-containing secretion formed by the glands in question.

When the inability to prove the absorption of the mucilaginous substance is taken into account, it is necessary to ascribe to this secretion another rôle. The author regards it as protective. By reason of its viscosity, this mucilage holds the insects that come in contact with it, kills them in a short time, then by the action of the pepsin which it contains, dissolves them and thus frees the leaf of them. In connection with the lower organisms, this protective function is still more marked. The entrance of bacteria and of spores of fungi into the interior tissues of this plant would result in serious consequences. The glands and their secretions prevent this since spores of fungi were found not to grow in this mucilage.—RODNEY H. TRUE.

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[1] Annales des Sci. Nat. Bot. VIII. **2:** 19. 1896.